DOCUMENT RESUME

ED 346 866 IR 054 067

AUTHOR Krentz, Roger F.; Gerlach, Donald E.
TITLE Library Literacy of Incoming College Freshmen.
PUB DATE 89
NOTE 33p.
PUB TYPE Reports - Research/Technical (143) --
Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; Academic Libraries; *College Bound Students; *College Freshmen; Comparative Analysis; Higher Education; High Schools; *Library Instruction; *Library Skills; Pretests Posttests; Research Needs
IDENTIFIERS University of Wisconsin Platteville

ABSTRACT

This study of the impact of high school library media skills instruction on the college bound student was designed to determine whether high school students have learned sufficient library skills to enable them to use an academic library successfully upon entering college. A library awareness test was administered to first-semester students in several college classes at the University of Wisconsin-Platteville in the fall of 1988. Selected subjects were divided into a test group (n=44) and a control group (n=29) and a pretest was administered to both groups to determine the level of library media skills they had acquired in high school. Students in the test group were then required to sign up for a bibliographic session at the university library, after which a posttest was administered to provide a point of comparison for the two groups. The study achieved its primary objective, i.e., to show the level of library media resource and retrieval skills of incoming freshmen. However, a secondary outcome indicated that a 1.5 hour orientation session was inadequate to make a measurable impact for the test sample, and, in fact, resulted in a slightly lesser score for the test group. The control group gain was statistically insignificant. It is concluded that more effort should be directed toward increasing opportunities for bibliographic instruction at both the high school and academic levels, and additional research should be done in relation to the level of library competency of graduating high school students. Charts of information about library media skills, tables displaying the study data, and the library awareness questionnaire are included. (11 bibliographic endnotes) (BBM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

IR

ED346866

Library Literacy of Incoming College Freshmen

Roger F. Krentz, PhD.
Head, Learning Materials Center
Harold Andersen Library
University of Wisconsin-Whitewater
Whitewater, WI

Donald E. Gerlach
Senior Academic Librarian
College Library
University of Wisconsin-Madison
Madison, WI

1120540607

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Donald E. Gerlach

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

LIBRARY LITERACY OF INCOMING COLLEGE FRESHMEN

ABSTRACT

High school library media specialists, like their secondary education colleagues, are preparing their students for life following high school. This preparation generally applies equally to those who may continue their schooling and those who will not. Academic librarians, like their higher education colleagues, work with students whose secondary education backgrounds range widely. The library-use preparation which students have as they enter college has a subtle but significant effect on the work of bibliographic instruction librarians. This study presents an analysis of library preparation at the secondary education level and a measure of that preparation upon entering college.

LIBRARY LITERACY OF INCOMING COLLEGE FRESHMEN

BACKGROUND AND QUESTIONS

While they were having lunch one day, an academic librarian asked a school librarian, "Don't high school librarians teach library skills to students anymore?" At the time, the school librarian was the library media director at a small school district. The academic librarian's question was not referring specifically to the local school district, but was posing the broader question based on several years of experience working with first semester college freshmen whose collective experience was gained from a wide range of elementary and high schools.

It is the conviction of high school library media specialists, in general, that they are providing their students with the basic skills necessary to function successfully in an academic library as they enter college and, as well, for life-long learning.[1] The question that is being addressed here is not the teaching ability of the high school library media specialist, but whether secondary education students have learned, by the time they graduate from high school, fundamental library media skills which will provide them with a basic readiness to use an academic library.

The authors believe that by determining the library media skills which high school seniors should learn by the time they graduate, three things will result: 1) an enumeration of those skills will be established, 2) a reference point for the academic bibliographic instruction librarian will be provided, and 3) any major gaps (discrepancies) between the two will become evident.

The list of library media skills to be considered in this

study was compiled from the sources shown in Figure 1.[2] While these sources do not obviously account for other segments of essential library use skills, e.g., research process and critical thinking skills, it must be understood that it was not the intent of this study to address those equally important skills. Instead this study concentrates on the location and source-oriented skills. These latter, initial-level skills should be mastered early so that an effective progression can be made to emphasizing research process and critical thinking. Because that mastery does not always take place during the early years of library skills instruction, reinforcement of them is often necessary at the time the higher-level research process and critical thinking skills are being emphasized. One can find the ultimately important thinking and process skills being increasingly addressed in the literature.[3]

The principal library skills source which was reviewed for this study was The Wisconsin Library Media Skills Guide.[4] The Wisconsin guide was chosen not only because the authors are most familiar with it but also because it is commonly recognized as a leading source among library skills guides.[5] The Wisconsin guide uses a four-step scale to indicate the intensity of instruction which applies at each level for each skill, i.e., "acquaint," "instruct," "reinforce/review," and "not applicable." The skills listed in this guide were compared with a number of standardized tests which either included a library media skills component or were predominantly library oriented. An outcome of this comparison was the compilation of a broad range of resource and retrieval high school library media skills. Figure 1 lists those

skills and shows which of the standardized test sources provide for the measurement of them. The greatest agreement among those sources is in the reference skills subcategory shown under "IV. Research and Study Skills." As one would expect, the range of skills presented is greater in those sources which are library-media-skills specific in comparison with those sources which are general achievement tests not limited to library media skills.

It is readily apparent that six of the seven instruments test for card catalog skills and four of the seven test the alphabetical and numerical order skills as well as the Dewey Decimal System. The basic skills sources indicate that these three areas are to be reinforced and/or reviewed.

The research and study skills component of the Wisconsin Library Media Skills Guide has been compared in further detail with the various achievement and library skills tests represented in this study (Figure 2). Again, the basic area of agreement is concentrated in the reference skills category. Dictionaries, encyclopedias, and indexes are shown to receive the major emphases. It should be noted that some of the standardized achievement tests which are not library-media-skills specific include map reading and atlas skills in the social studies component of those tests. These are more often included in the library skills segment of standardized achievement tests.

Figure 1 shows consensus that reference skills should be the major emphasis in the 12th grade. However, the same agreement is not evident when attempting to identify which of the reference skills should be mastered (or even taught) beyond very basic skills (Figure 2). Why is this? Why isn't there agreement on a

greater number of reference skills? Do we really expect secondary education seniors to master little more than the use of the dictionary, encyclopedia, and index?

Perusing a number of 12th grade library media scope and sequence tables contained in library media curriculum guides, one would find little difference between the skills listed in them and the skills listed in Figure 1.[6] And while many authors have written about the most effective way to teach library media skills to high school students, the identification of which skills should be taught has been inadequate.[7] Unfortunately, there is no reliable instrument which educators can use to assess the library media proficiency of graduating high school seniors.

School and academic librarians agree that development of library media skills should be an integral part of the instruction within the various subject areas, i.e., it is at that point that the best opportunity and conditions for both the teaching and learning of those skills occurs.[8]

If, as indicated above, reference skills are the major thrust of the 12th grade library media program, one should be able to assume that those skills would be integrated into the subject areas exemplified by, for example, the new Wisconsin subject area curriculum guides and that a means for measuring the level of mastery of those skills should, in addition, be made available. The bibliographic instruction librarian should have some means for determining the level of library skills proficiency being achieved in the schools. It is imperative that library media specialists at the high school level build on the skills taught in the elementary grades and that they teach the

reference and research skills which will provide college entrants with a solid foundation for their initial use of a college library.

Obviously, individual learning styles as well as differences in teaching methods will affect levels of proficiency. However, there should be a core of library media skills which could be used as a demonstration-based measurement of the proficiency of graduating seniors. The library media skills core could, for instance, be those skills shown in Figure 2. If the list of minimum library use skills in Minimum Library Use Skills: Standards, Test, and Bibliography, developed by the Wisconsin Association of Academic Librarians in 1984, were modified slightly, it would serve as an excellent list of core location and source-oriented skills for a high school library media skills program (research process and critical thinking skills would need to added).[9] That list includes all of the skills represented in Figures 1 and 2 and expands on some of them. An annotated compilation of the location and source-oriented skills is shown in Figure 3.

In an attempt to determine the impact high school library media skills instruction has on the college bound student, a study was planned and executed based on the following question: have high school students learned sufficient resource and retrieval library media skills to enable them use an academic library successfully upon entering college? A test available in Minimum Library Use Skills; Standards, Test, and Bibliography was adapted to meet local circumstances and was administered to several college classes (Appendix A).

METHOD

This study was conducted with students from nine freshman English composition classes at the beginning of the Fall 1988 semester at the University of Wisconsin-Platteville. The students were divided into two groups--a control group and a test group. The selection criteria for the population to be studied was that students had to have graduated from a high school in the United States during the previous semester (Spring 1988) and had to have had no previous library orientation at the college level, e.g., through any of their current classes on campus. For a number of reasons, many of the students in the nine classes did not meet the criteria and those students were eliminated from the study, e.g., non-first semester students, international students, and nontraditional students. There were forty-four students in the test group and twenty-nine students in the control group. All of the students took the pretest during the first four weeks of the semester, and both groups took the posttest between the sixth and the tenth weeks of the semester.

The pretest (Appendix A) sought to determine the resource and retrieval library media skills which the students had acquired in their schools prior to enrolling at UW-Platteville. The test instrument was pretested and validated by administering it to first semester freshmen composition students from classes not participating in the study. A secondary outcome of this study was derived through the use of a posttest. The posttest was designed to provide a point of comparison for recent high school graduates who had no bibliographic instruction (BI) at the

academic level with those who had. After the pretest, test-group students from the randomly selected classes were required, with the cooperation of their first semester freshman composition instructors, to sign-up for a bibliographic instruction session. Eight BI sessions were offered. The sessions emphasized using the library's book collection (including the government publications collection) and using the library's periodicals collection (including the newspaper collection). The BI sessions highlighted six areas: 1) use of Library of Congress Subject Headings, 2) basic use of the online catalog system, 3) location of material using Library of Congress call numbers, 4) basic use of periodical indexes in both paper and CD-ROM formats, 5) use of the list of periodical holdings in both paper and microfiche formats, and 6) use of NewsBank for locating newspaper articles. Two hands-on activities were an integral part of the lecture sessions and, following the lectures, tours were taken of those library areas which were discussed during the lecture.

During the pretest, all of the students were allowed to skip two sections of the test: 1) use of Library of Congress Subject Headings and 2) using NewsBank. These were the two areas of the test about which students who had just graduated from high school would likely have no knowledge. However, the test group was not allowed to skip those sections during the posttest because it had been introduced to those topics in the orientation sessions. While these sections were not included in the scoring designed to compare the two groups, they provided additional elements for observing the effectiveness of the BI sessions.

FINDINGS

The general descriptive statistical methods were employed to calculate the mean, standard deviation, and a 95% confidence interval when comparing the two groups. In this study, the results were further computed to determine each group's pretest/posttest gain scores and a t-test was calculated between experimental and control groups on these gain scores.

The pre/post test scores for each group (Figures 4 & 5) are similar for both groups in this study. These scores show there is no significant difference among the groups. The means are very similar. The mean gain scores for the control group and test group are illustrated in Figure 6. The control group gained slightly. The test group is shown to have regressed slightly. In the t-test, as illustrated in Figure 7, individual group pretest/posttest comparisons and control/test group gain score comparisons show no significant difference between pre- and post-, control and test groups.

CONCLUSIONS

This study was basically concerned with library-use knowledge acquired prior to entering college. The primary objective of the study was achieved and did show what college freshmen know in relation to library media resource and retrieval skills. A secondary outcome showed that a short orientation session was inadequate for the test sample involved in the study to make a measurable impact and, in fact, resulted in a slightly lesser score for the test group. The control group gain was statistically insignificant. This may indicate that a one and

one-half hour orientation session has a diminished impact when it is not followed by sufficient time for students to apply the library media resource and retrieval skills along with the higher level thinking skills to a specific course assignment. Others have shown the effects of longer-term bibliographic instruction programs.[10]

It needs to be recognized that there are various levels of bibliographic instruction. This study examined the primary level, i.e., location and source-oriented library media skills. It is implicit in the scope and sequence skills guides (Figure 1) that students should first be taught about the various kinds of resources in a library media center and how to locate them before they advance to the next levels involving the multiple elements of the research process and the principles of critical thinking in the use of library resources.

More effort at the high school and academic level should be directed toward broadening the scope and number of bibliographic instruction sessions to incorporate not only the resource and retrieval skills, but also the higher-level research and critical thinking skills. Bibliographic instruction, whether it emphasized resource and retrieval skills or research and critical thinking skills, should be related to a subject area or course/class assignment to be meaningful for the students, regardless of education level.[11]

RECOMMENDATIONS

Additional research should be done in relation to the level of library competency which graduating high school students have

achieved. This knowledge could help both high school library media specialists and high school teachers to effectively assess the integration of library media skills into their planning and teaching. In addition, it could provide the academic librarian with a reference point from which academic-level bibliographic instruction could begin.

With the rapid changes in the means and methods of locating and retrieving information, further study should concentrate on the methodologies for introducing students, at both the school and academic level, to online catalogs, CD-ROM products (both indexes and full-text), and current telecommunication networks. The need for traditional location and retrieval skills may, in the not-too-distant future, be overshadowed by the need to know the protocols for using a host of resources in electronic formats. Academic libraries will need to continue to address the location- and retrieval-skill disparity of incoming freshmen and transfer students.

In this world characterized by information overload, it is imperative that high school seniors/college freshmen be both knowledgeable about and adept at retrieving, evaluating, and assimilating information. Library media specialists, academic librarians, and other educators owe their students that kind of preparedness not only for the short term needs of a college career but also for the long term needs of a successful and rewarding life

REFERENCES

1. M. Briggs, "Forward to Basics in Library Instruction," School Library Journal 25:44 (May 1979); Laurel Municipal Separate School District, Essential Skills for College Bound Students, ESEA Title IV-C Project Product (Laurel, Miss.: School District, 1983) ERIC Document Reproduction Service No. ED 233 354, p.3.; and D. J. Kenney and L. J. Wilson, "Developing a Partnership in Library Instruction," C&RL News 47:321 (May 1986).
2. The Wisconsin Library Media Skills Guide (Madison, Wis.: Wisconsin Association of School Librarians, Wisconsin Library Association, 1987); Library Skills Test, Illinois Association of College and Research Libraries (Bensenville, Ill.: Scholastic Testing Service, 1981); A. H. Brigance, Brigance Diagnostic Inventory of Essential Skills (North Billerica, Mass.: Curriculum Associates, 1981); Comprehensive Tests of Basic Skills: CTBS. Form U (Monterey, Calif.: CTB/McGraw-Hill, 1981); Science Research Associates, Iowa Tests of Educational Development Grades 9-12, Form X4 (Chicago: SRA, Inc., 1963); Science Research Associates, SRA Achievement Series Level H/Form 1 (Chicago: SRA, Inc., 1978); and A. M. Hyland, Ohio School Library/Media Test (Worthington, Ohio: The Author, 1978).
3. B. P. Cleaver, "Thinking About Information Skills for Lifelong Learning," School Library Media Quarterly 16:29-31 (Fall 1987) and C. C. Kuhlthau, "Information Skills Tools for Learning," School Library Media Quarterly 16:22-28 (Fall 1987).
4. The Wisconsin Library Media Skills Guide.

5. M. H. Hackman, Library Media Skills and the Senior High School English Program (Littleton, Colo.: Libraries Unlimited, 1985), p.29 and H. T. Walker and P. K. Montgomery, Teaching Media Skills (Littleton, Colo: Libraries Unlimited, 1977) p. 14.
6. Connecticut. Board of Education, A Guide to School Library Media Programs (Hartford, Conn.: Connecticut State Board of Education, 1982) p. 17; Shelby County Board of Education, Library Skills Continuum with Related Activities (Memphis, Tenn.: Shelby County Board of Education, 1977) p. 12-14; Baltimore County Public Schools, Library and Media Skills K-12: Program of Instruction (Townson, Md.: Baltimore County Public Schools, 1986); Travis Unified School District. Curriculum & Instruction Dept., K-12 Library Program (Travis AFB, Calif.: Travis Unified School District, 1986) p. 7-10; and The Wisconsin Library Media Skills Guide, p. 101-113.
7. M. H. Hackman; and C. C. Kuhlthau, Teaching the Library Research Process: A Step-By-Step Program for Secondary School Students (West Nyack, N.Y.: Center for Applied Research in Education, 1985).
8. C. C. Kuhlthau, "A Process Approach to Library Media Skills Instruction," School Library Media Quarterly 14:35-40 (Winter 1985); American Association of School Librarians, Information Power: Guidelines for School Library Media Programs (Chicago: American Library Association; Washington, D.C.: Association for Educational Communications and Technology, 1988) and Wisconsin. Library Media Guidelines Task Force, School Library Media Programs: A Resource and

Planning Guide (Madison, Wis.: Wisconsin Dept. of Public Instruction, 1987).

9. Minimum Library Use Skills: Standards, test, and Bibliography, edited by Jo Ann Carr (Madison, Wis.: Wisconsin Association of Academic Librarians, Wisconsin Library Association, 1984) p. iii-iv.

10. J. Kaplowitz, "A Pre and Post Test Evaluation of English 3--Library Instruction Program at UCLA," Research Strategies 4:11-17 (Winter 1986); J. C. Selegean, M. L. Thomas, and M. L. Richman, "Long-Range Effectiveness of Library Use Instruction," College & Research Libraries 43:476-480 (Nov. 1983) and L. Hardesty, N. P. Lovrich, Jr., and J. Mannon, "Library-Use Instruction: Assessment of the Long-Term Effects," College & Research Libraries 43:38-47 (Jan. 1982).

11. M. B. Eisenberg and R. E. Berkowitz, Curriculum Initiative--An Agenda and Strategy for Library Media Programs (Norwood, N.J.: Ablex Publishing Corp., 1988); D. V. Loertscher, Taxonomies of the School Library Media Program (Englewood, Colo.: Libraries Unlimited, 1988); M. H. Hackman; and American Association of School Librarians.

FIGURE 1

Sources for Library / Media Skills

SKILLS TO BE TAUGHT	WASL	Library Skills Test	Inventory of Essential Skills	Comprehensive Test of Basic Skills J	Iowa Tests of Educational Development	SRA Achievement Level H/Form 1	Ohio School Lib./ Media Test
I. L/MC ORIENTATION	12TH						
A. L/MC PERSONNEL AND PROCEDURES	3	----	----	----	----	----	----
B. CARE AND RESPONSIBILITY FOR MATERIAL, EQUIPMENT AND FACILITIES	3	----	----	----	----	----	----
C. LOCATION OF MATERIALS AND EQUIPMENT	3	----	----	----	----	----	----
*D. USING LIBRARY TERMINOLOGY	----	✓	----	----	----	----	----
II. ORGANIZATION AND UTILIZATION OF RESOURCES							
A. ALPHABETICAL ORDER AND NUMERICAL ORDER	----	----	✓	----	✓	✓	✓
B. DEWEY DECIMAL SYSTEM	3	✓	----	----	----	✓	✓
C. CARD CATALOG	3	✓	✓	----	✓	✓	✓
D. OPERATION OF EQUIPMENT	3	----	----	----	----	----	----
*E. LC CLASSIFICATION SYSTEM	----	✓	----	----	----	----	✓
III. SELECTION OF RESOURCES							
A. ILLUSTRATORS AND AUTHORS	N/A	----	----	----	----	----	----
B. THE BOOK AS AN ART FORM	N/A	----	----	----	----	----	----
C. OTHER MEDIA AS AN ART FORM	N/A	----	----	----	----	----	----
D. LITERARY FORMS	3	----	----	----	----	----	----
E. CENSORSHIP	2/3	----	----	----	----	----	----
F. EVALUATION OF MATERIALS	3	----	----	----	----	----	✓
IV. RESEARCH AND STUDY SKILLS							
A. PARTS OF A BOOK AND OTHER MATERIALS	3	✓	----	----	✓	----	✓
B. LISTENING AND VIEWING SKILLS	N/A	----	----	----	----	----	----
C. REFERENCE MATERIALS	2	✓✓✓	✓✓✓	✓	✓	✓✓✓	✓
D. COMMUNITY AND OTHER INFORMATION SOURCES	1/2	----	----	----	✓	✓	✓
E. ON-LINE SEARCH SKILLS	1/2	----	----	----	----	----	----
	1987	1980	1981	1981	1963	1978	1978

KEY

STEP 1 = ACQUAINT
STEP 2 = INSTRUCT
STEP 3 = REINFORCE/REVIEW
N/A = NOT APPLICABLE

* Arbitrarily assigned

FIGURE 2

Library / Media Skills Achievement Test Comparison

KEY STEP 1 = ACQUAINT STEP 2 = INSTRUCT
STEP 3 = REINFORCE/REVIEW N/A = NOT APPLICABLE

	WASL	Library Skills Test	Inventory of Essential Skills	Comprehensive Test of Basic Skills J	Iowa Tests of Educational Development	SRA Achievement Level H/Form 1	Ohio School Lib./ Media Test
IV. RESEARCH AND STUDY SKILLS							
A. PARTS OF A BOOK AND OTHER MATERIALS							
1. LOCATE, IDENTIFY, EXPLAIN ALL MAJOR PARTS OF ANY FORM OF MATERIAL	3	✓	----	----	✓	----	----
2. DEMONSTRATE THE ABILITY TO CITE FOOTNOTES & BIBLIOGRAPHY	3	----	----	----	----	----	----
B. LISTENING AND VIEWING SKILLS	XXX	XXX	XXX	XXX	XXX	XXX	XXX
C. REFERENCE MATERIALS	2	----	----	----	----	----	----
1. IDENTIFY, LOCATE & USE REFERENCE TOOLS BASIC TO ALL SUBJECT AREAS	2	----	----	----	----	----	----
A. DICTIONARIES	2	----	✓	✓	✓	✓	✓
B. ENCYCLOPEDIAS	2	✓	✓	----	✓	----	✓
C. INDEXES	2	✓	✓	✓	✓	----	✓
D. HANDBOOKS	2	----	----	----	----	----	----
E. DIGESTS	2	----	----	----	✓	----	----
F. YEARBOOKS	2	----	----	----	✓	----	✓
G. ATLASES	2	----	----	✓	----	----	----
H. ALMANACS	2	✓	----	----	✓	----	----
I. BIOGRAPHICAL	2	✓	----	----	----	----	----
J. SERIES, I.E. SIRS ETC.	2	----	----	----	----	----	----
K. ABSTRACTS	2	----	----	----	----	----	----
L. THESAURI	2	----	----	----	----	----	----
2. IDENTIFY LOCATE & USE THE READER'S GUIDE TO FIND SPECIFIC PERIODICAL TITLES	2	✓	----	----	----	----	✓
3. IDENTIFY & USE THE VERTICAL FILE FOR PAMPHLET & CLIPPING MATERIAL	2	----	----	----	----	----	----
4. BE ABLE TO EVALUATE INFORMATION AS BEING USEFUL OF APPROPRIATE TO THEIR PURPOSE	2	----	----	----	----	----	✓
5. UNDERSTAND RESEARCH STRATEGIES	2	----	----	----	----	----	----
D. COMMUNITY & OTHER INFORMATION SOURCES	2	----	----	----	----	----	----
1. DEVELOP INFORMATION GATHERING STRATEGIES BASED ON NEED	1/2	----	----	----	----	----	----
2. LEARN TO USE VARIETY OF ILL OPPORTUNITONS	1/2	----	----	----	----	----	----
3. USE L/MC & OTHER COMMUNITY RESOURCES IN CAREER PLANNING	1/2	----	----	✓	----	----	----
4. DETERMINE MOST EFFECTIVE WAY TO PRESENT INFORMATION	1/2	----	----	----	----	----	----
E. ON-LINE SEARCH SKILLS	1/2	----	----	----	----	----	----
1. UNDERSTAND ON-LINE & APPLICATION							

FIGURE 3

WAAL MODIFIED SKILLS

The WAAL Committee on Education in Library Use recommends that the following be adopted as standard, minimum skills to be acquired by all wisconsin college students by the end of their sophomore year.

WAAL MINIMUM LIBRARY USE SKILLS	MODIFIED FOR HIGH SCHOOL
1. Knowing the physical arrangement of materials and services. (Location of reserve books, microforms, reference, branch libraries, etc.	Same as WAAL
2. Knowing how to choose appropriate subject headings for researching a given topic.	Use Sears and introduce LC if available
3. Locating resources by searching under author, title or subject in the card, on-line, COM, or book catalog.	In CC and if available on-line and COM catalog
4. Interpreting the bibliographic information found in the card, on-line, COM, or book catalog	Same as 3
5. Using appropriate periodical indexes, abstracts or subject bibliographies for a given topic.	Minimum - Reader's Guide
6. Interpreting the information found in basic periodical indexes, abstracts or newspaper indexes.	Same as 5
7. interpreting the information found in the library's periodical records.	Same as WAAL
8. Distinguishing citations to books from citations to periodicals, and recognizing citations to audio-visual materials, and government documents.	Same as WAAL
9. Compiling a basic bibliography.	Same as WAAL
10. Understanding the library's call number system enough to retrieve materials from the shelves.	Introduce LC
11. Using basic reference sources - some examples: Subject dictionaries, encyclopedias and bibliographies Yearbooks, almanacs, annual reviews Statistical sources Biographical Sources	Same as WAAL
12. Use of micro forms and other audio-visual materials and equipment.	Same as WAAL (Include CD-ROM products if available)
13. Knowing when to consult a librarian.	Same as WAAL

Additional, more comprehensive skills of increasing difficulty should be learned by the time of gradUation, preparing the student to conduct independent research.

Figure 4

Library Control Group Pre/Post Test

	Post # right	Pre #right	Post %right	Pre %right	Post Percentile	Pre Percentile	Post Rank	Pre Rank
1	34	32	100.00	94.12	98	97	1.0	1.5
2	31	32	91.18	94.12	95	97	2.0	1.5
3	30	29	88.24	85.29	88	86	4.0	4.5
4	30	29	88.24	85.29	88	86	4.0	4.5
5	30	29	88.24	85.29	88	86	4.0	4.5
6	29	29	85.29	85.29	78	86	7.0	4.5
7	29	28	85.29	82.35	78	74	7.0	8.0
8	29	28	85.29	82.35	78	74	7.0	8.0
9	28	28	82.35	82.35	71	74	9.0	8.0
10	27	27	79.41	79.41	64	62	11.0	11.5
11	27	27	79.41	79.41	64	62	11.0	11.5
12	27	27	79.41	79.41	64	62	11.0	11.5
13	26	27	76.47	79.41	57	62	13.0	11.5
14	25	26	73.53	76.47	47	52	16.0	14.5
15	25	26	73.53	76.47	47	52	16.0	14.5
16	25	25	73.53	73.53	47	41	16.0	17.5
17	25	25	73.53	73.53	47	41	16.0	17.5
18	25	25	73.53	73.53	47	41	16.0	17.5
19	24	25	70.59	73.53	31	41	20.5	17.5
20	24	23	70.59	67.65	31	26	20.5	22.0
21	24	23	70.59	67.65	31	26	20.5	22.0
22	24	23	70.59	67.65	31	26	20.5	22.0
23	23	23	67.65	67.65	17	26	24.5	22.0
24	23	23	67.65	67.65	17	26	24.5	22.0
25	23	22	67.65	64.70	17	16	24.5	25.0
26	23	21	67.65	61.76	17	10	24.5	26.5
27	21	21	61.76	61.76	9	10	27.0	26.5
28	16	19	47.06	55.88	5	5	28.0	28.0
29	14	15	41.18	44.12	2	2	29.0	29.0

Posttest mean	25.552
Pretest mean	25.414

Figure 5

Library test group Pre/Post test

	Post # right	Pre #right	Post %right	Pre %right	Post Percentile	Pre Percentile	Post Rank	Pre Rank
1	32	32	94.12	94.12	99	98	2.0	1.5
2	31	32	91.18	94.12	95	98	2.5	1.5
3	31	31	91.18	91.18	95	93	2.5	3.5
4	30	31	88.24	91.18	88	93	6.0	3.5
5	30	30	88.24	88.24	88	85	6.0	7.0
6	30	30	88.24	88.24	88	85	6.0	7.0
7	30	30	88.24	88.24	88	85	6.0	7.0
8	30	30	88.24	88.24	88	85	6.0	7.0
9	29	30	85.29	88.24	75	85	11.5	7.0
10	29	29	85.29	85.29	75	75	11.5	11.5
11	29	29	85.29	85.29	75	75	11.5	11.5
12	29	29	85.29	85.29	75	75	11.5	11.5
13	29	29	85.29	85.29	75	75	11.5	11.5
14	29	28	85.29	82.35	75	69	11.5	14.0
15	28	27	82.35	79.41	67	67	15.0	15.0
16	27	26	79.41	76.47	63	63	17.0	17.0
17	27	26	79.41	76.47	63	63	17.0	17.0
18	27	26	79.41	76.47	63	63	17.0	17.0
19	26	25	76.47	73.53	53	53	21.0	21.0
20	26	25	76.47	73.53	53	53	21.0	21.0
21	26	25	76.47	73.53	53	53	21.0	21.0
22	26	25	76.47	73.53	53	53	21.0	21.0
23	26	25	76.47	73.53	53	53	21.0	21.0
24	25	24	73.53	70.59	44	44	25.0	25.0
25	25	24	73.53	70.59	44	44	25.0	25.0
26	25	24	73.53	70.59	44	44	25.0	25.0
27	24	23	70.59	67.65	36	32	28.5	30.5
28	24	23	70.59	67.65	36	32	28.5	30.5
29	24	23	70.59	67.65	36	32	28.5	30.5
30	24	23	70.59	67.65	36	32	28.5	30.5
31	23	23	67.65	67.65	30	32	31.5	30.5
32	23	23	67.65	67.65	30	32	31.5	30.5
33	22	23	64.71	67.65	26	32	33.0	30.5
34	21	23	61.76	67.65	20	32	35.5	30.5
35	21	22	61.76	64.71	20	17	35.5	37.0
36	21	22	61.76	64.71	20	17	35.5	37.0
37	21	22	61.76	64.71	20	17	35.5	37.0
38	20	22	58.82	64.71	14	17	38.5	37.0
39	20	22	58.82	64.71	14	17	38.5	37.0
40	19	20	55.88	58.82	10	9	40.0	40.5
41	18	20	52.94	58.82	8	9	41.0	40.5
42	17	18	50.00	52.94	6	3	42.0	43.0
43	15	18	44.12	52.94	2	3	43.5	43.0
44	15	18	44.12	52.94	2	3	43.5	43.0

Posttest mean	25.091
Pretest mean	25.227

Figure 6

Mean of the gain (difference) in pre and post test scores

	Mean	Std. Dev.	Cases
For entire population	-.0274	3.5078	73
Control Group	.1379	2.6823	29
Test Group	-.1364	3.9860	44

Figure 7

Paired comparison T-test of pre and post scores for each group

Variable	# of Cases	Mean	Std. Dev.	Std. Error	Diff. Mean	Std. Dev.	Std. Error	2-Tail Corr.	Prob.	T Value	Deg. Fred.	2-tail Prob.
Post-control	29	25.5517	4.188	0.778	0.1379	2.682	0.498	0.778	0.0	0.28	28	0.784
Pre-control		25.4138	3.775	0.701								
Post-test	44	25.0909	4.450	0.671	-0.1364	3.986	0.601	0.550	0.0	-0.23	43	0.822
Pre-test		25.2273	3.887	0.586								

					F Value	2 Tail Prob.	T Value	Deg. Fred.	2-Tail Prob.			
Control	29	0.1379	2.682	0.498	2.21	0.629	0.23	71	0.746	0.35	70.95	0.726
Test	44	-0.1364	3.986	0.601								

Appendix A

Library Awareness Questionnaire

NOTE	1. DO NOT mark your answers to the following questions on this sheet. Use the separate answer sheet provided. 2. ONLY PENCIL may be used to mark answers. Please make the pencil marks dark. 3. ONLY ONE ANSWER is correct for each question.

GENERAL INFORMATION

*›››››››››The name of your freshman composition instructor is:

(Write answer in upper left corner of answer sheet.)

*›››››››››The name of the last high school you attended is:

(Write answer in upper right corner of answer sheet.)

1. Year you graduated from high school:
   A. 1988
   B. 1987
   C. 1986
   D. 1985
   E. other

2. Did you graduate from a high school in the United States?
   A. yes
   B. no

3. Have you ever attended a one-hour library orientation session in one of UW-P's library classrooms?
   A. yes
   B. no

THE PHYSICAL ARRANGEMENT OF LIBRARY MATERIALS AND SERVICES

4. The reference desk is a place to:
   A. check out materials.
   B. ask a librarian for help.
   C. register a complaint.
   D. get photocopies of articles that your classroom teacher placed in the library.

5. The books and audiovisual media in the library are shelved by:
   A. author.
   B. Dewey Decimal call number.
   C. Library of Congress call number.
   D. title.

6. The place in the library where materials are checked out and returned is called the
   A. Circulation Desk.
   B. Reference Desk.
   C. Information Desk.
   D. Stacks area.

LOCATING MATERIAL BY SEARCHING UNDER TITLE, AUTHOR, OR SUBJECT IN THE CARD CATALOG OR COMPUTER CATALOG

Use this computer catalog SAMPLE to answer questions 7 - 9:

(A) Buehler, Ezra Christian, 1894-
(B) Building the contest oration, by E.C. Buehler and Richard L. Johannesen. New York, H.W. Wilson, 1965.
202p. 19cm.
(C) "Selected sources on the American Constitution": p.196-197.

(D) Elocution.
(D) Oratory--Competitions.
Johannesen, Richard L., joint author.

LOCATION	CALL#/VOL/NO/COPY	STATUS
GENERAL	PN4121 .B779	Available

7. The title of the computer catalog item shown above is given in the section labeled:
   A. B. C. D.

8. The author of the computer catalog item shown above is given in the section labeled:
   A. B. C. D.

9. The subject headings this item would be found under in the computer catalog are given in the sections labeled:
   A. B. C. D.

INTERPRETING THE INFORMATION FOUND IN THE CARD CATALOG OR COMPUTER CATALOG

Use this SAMPLE computer catalog information to answer questions 10 - 13:

(A) Meyer, Donald B.
(B) The positive thinkers, a study of the American quest for health, wealth and personal power from Mary Baker Eddy to Norman Vincent Peale, by Donald Meyer. 1st ed.
(B) Garden City, NY, Doubleday, 1965.
(C) 358p. 22cm.
Bibliographical referenced included in "Notes" (p. 336--350)

(D) Psychology - History - US
(D) Psychology, Applied History
(D) Success
(D) Faith-Cure

LOCATION	CALL #/VOL/NO/COPY	STATUS
GENERAL	(E) BF108.U5 M4	AVAILABLE

10. The call number for this item is given in the section labeled:
A. B. C. D. E.

11. The publisher of this item is given in the section labeled:
A. B. C. D. E.

12. The number of pages for this item is given in the section labeled:
A. B. C. D. E.

13. The subject headings for this item are listed in the section labeled:
A. B. C. D. E.

USING APPROPRIATE PERIODICAL INDEXES FOR A TOPIC

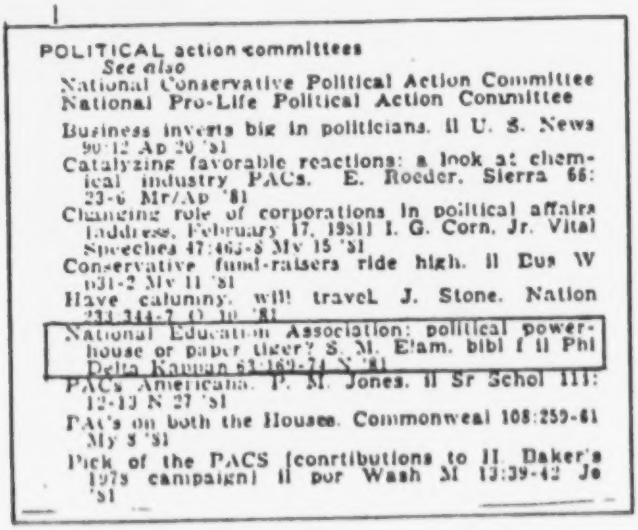
14. To find the most current information on your topic you would consult:
A. rare books.
B. periodical articles.
C. encyclopedia articles.
D. bibliographies.

15. Entries in periodical indexes are usually arranged by the:
A. author of the article.
B. title of the article.
C. title of the periodical.
D. subject of the article.

16. Periodical indexes can be both general and subject specific. To find the most information about elementary teachers you would consult:
A. Readers' Guide to Periodical Literature.
B. Education Index.
C. Business Index.
D. Social Sciences Index.

INTERPRETING INFORMATION FOUND IN BASIC PERIODICAL INDEXES

Using this SAMPLE from the Readers' Guide to Periodical Literature, answer questions 17 - 22:



POLITICAL action committees
See also
National Conservative Political Action Committee
National Pro-Life Political Action Committee

Business invests big in politicians. il U. S. News 90:12 Ap 20 '81
Catalyzing favorable reactions: a look at chemical industry PACs. E. Roeder. Sierra 66: 23-6 Mr/Ap '81
Changing role of corporations in political affairs [address, February 17, 1981] I. G. Corn, Jr. Vital Speeches 47:463-8 My 15 '81
Conservative fund-raisers ride high. il Bus W n31-2 My 11 '81
Have calumny, will travel. J. Stone. Nation 231:344-7 O 10 '81
National Education Association: political powerhouse or paper tiger? S. M. Elam. bibl f il Phi Delta Kappan 63:169-74 N '81
PACs Americana. P. M. Jones. il Sr Schol 111: 12-13 N 27 '81
PACs on both the Houses. Commonweal 108:259-61 My 8 '81
Pick of the PACS [contributions to H. Baker's 1978 campaign] il por Wash M 13:39-42 Je '81

17. How many periodical articles are listed under the subject heading "Political action committees?"
A. 11 B. 2 C. 13 D. 9

18. The name of the periodical for the boxed-in article is:
A. Delta Kappan.
B. Phi.
C. National Education Association.
D. Phi Delta Kappan.

19. The volume number of the periodical for the boxed-in article is:
A. 169.
B. 63.
C. 174.
D. 81.

20. The boxed-in article is how many pages long?
A. 6 B. 63 C. 169 D. 12

21. The abbreviation "bibl" stands for:
A. bibliophile.
B. biography.
C. bibliography.
D. bibliotherapy.

22. Where can you find out the full title of the periodical in the last article, abbreviated as Wash M?
A. the card catalog.
B. the key to the abbreviations in the front of the index.
C. in the list of periodicals owned by this library.
D. on the second floor.

INTERPRETING THE INFORMATION FOUND IN THE LISTING OF PERIODICALS THAT THE LIBRARY OWNS

Use the following SAMPLE from the library's periodicals list to answer questions 23 - 25:

78000	SPORTS ILLUSTRATED MI/PE/R LOCATION- FIRST FLOOR MICROFILM= v.20, JA 1964 -	866

23. Sports Illustrated is kept by the library:
A. in paper copy
B. on microfilm
C. in loose-leaf format
D. on microfiche

24. The library has all issues of Sports Illustrated from Ja 1964 to:
A. v. 20
B. Dec. 1964
C. the present
D. 1984

25. Issues of Sports Illustrated older than 1964 are available:
A. in another part of the library
B. only from the publisher
C. through interlibrary loan
D. nowhere

CONTINUED NEXT PAGE

UNDERSTANDING THE LIBRARY'S CALL NUMBER SYSTEM ENOUGH TO FIND MATERIALS ON THE SHELVES

Using these SAMPLE call numbers, answer questions 26 - 27:

LIBRARY OF CONGRESS CALL NUMBERS

A.	B.	C.	D.	E.	F.
P	P	PB	PC	PE	PE
29	29	41	1640	1625	1625
.C25	.L891	.299	.C33	.A54	.C43
		M6			

26. A book with the call number PE1625 .C29 would be placed on the shelf
   A. between C and D.
   B. between D and E.
   C. between E and F.
   D. after F.

27. A book with the call number PC3295 .A95 would be placed on the shelf
   A. between A and B.
   B. between B and C.
   C. between C and D.
   D. between D and E.

INTERPRETING THE BIBLIOGRAPHIC INFORMATION FOUND IN THE CARD CATALOG OR COMPUTER CATALOG

28. To find a book on the life of Earnest Hemingway, you would look:
   A. under his name in the author/title part of the card catalog or computer catalog
   B. in a biography of American authors.
   C. in a periodical index.
   D. under his name in the subject part of the card catalog or computer catalog

29. Population data, numbers of accidents, crime rates, the cost of living, industrial data, etc., are all examples of:
   A. almanacs.
   B. statistics.
   C. atlases.
   D. periodicals.

30. A collection of useful facts, statistics, records, etc. published on a regular basis in the one volume is called a/an:
   A. encyclopedia.
   B. dictionary.
   C. directory.
   D. almanac.

31. A list of related books, articles, etc., found either as a separately published list or at the end of an article or book is called a/an:
A. biography.
B. glossary.
C. bibliography or "works cited" page
D. appendix.

USE OF MICROFORMS AND OTHER AUDIOVISUAL MEDIA AND EQUIPMENT

32. The term microforms refers to:
A. a film bearing a reduction of printed or other graphic matter.
B. a type of rust.
C. books with extremely small print.
D. slides to use with a microscope.

33. In a library the word hardware means:
A. films, filmstrips and other audiovisual media.
B. the shelves and other furnishings of the library.
C. material designed for advanced graduate students.
D. the equipment on which audiovisual media is played or projected.

HOW TO CHOOSE APPROPRIATE SUBJECT HEADINGS FOR RESEARCHING A TOPIC

(If you have never used the book, Library of Congress Subject Headings, to choose a card catalog subject heading for researching a topic, skip to the section FOLLOWING question 37.)

34. The book, Library of Congress Subject Headings
A. helps you choose subject terms to use in the library's card catalog or computer catalog.
B. lists only those subject headings used in the library's card catalog or computer catalog.
C. does not identify subjects related to your topic.
D. lists books in the library by subject.

Using this SAMPLE entry from Library of Congress Subject Headings, answer questions 35 - 37:

```
Table tennis
    sa Table tennis players
     x Ping-pong
    xx Racket games
       Tennis
  -- Rules
Table-top photography
    See Photography, Table-top
```

35. If you wanted materials on table-top photography, you would look in the card catalog or computer catalog under the subject heading:
A. See Photography, Table-top.
B. Table-top photography.
C. Photography, Table-top.
D. Photography.

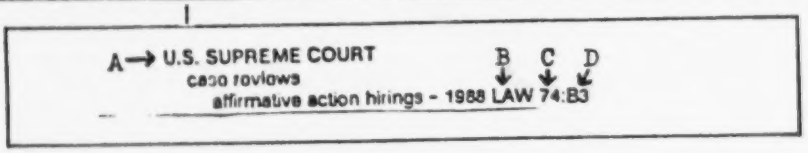
36. If you wanted books on ping-pong, which subject heading would you use first in the card catalog or computer catalog?
A. Ping-pong.
B. Rules.
C. Tennis.
D. Table tennis.

37. Related books on ping-pong might be found under the following headings:
A. Ping-pong, Table Tennis, Racket Games.
B. Table tennis players, racket games, tennis.
C. Rules, Racket games, Table-tennis players.
D. Table tennis players, Ping-pong, Racket games.

INTERPRETING INFORMATION FOUND IN NEWSPAPER INDEXES

(If you have never used a newspaper index, skip to question 42.)

Using the following SAMPLE from the NewsBank Index, answer questions 38 - 41:



38. The main subject heading is:
A. B. C. D.

39. The number of the NewsBank microfiche on which the article appears is:
A. B. C. D.

40. The row and column number of the microfiche is:
A. B. C. D.

41. The abbreviation for the name of the three ring binder in which the microfiche is located is:
A. B. C. D.

ASKING A LIBRARIAN FOR ASSISTANCE

42. You should consult a librarian when:
A. you don't know where to start looking for information.
B. you need additional information on a subject.
C. you want to make certain you have used the best reference source.
D. you need help in using library materials.
E. all of the above.

END OF QUESTIONNAIRE -- THANK YOU !

8